

HUD'S POST-DISASTER RECONSTRUCTION IN EL SALVADOR

Project Overview

In the fall of 1998, hurricanes Georges and Mitch battered Central America and the Caribbean, causing unprecedented damage. USAID transferred to HUD \$10 million as part of a \$621 million assistance bill. HUD used its expertise in housing and community redevelopment to rebuild communities in the region and help them become better able to resist the forces of natural disasters. All of the appropriated money was spent by January 31, 2002, including \$1.9 million for El Salvador.

HUD's innovative program has been well received by local officials and communities; provided model projects in land use planning, disaster preparedness, housing construction training and housing finance; illustrated the critical importance of housing and land use planning in any effective reconstruction program; and highlighted how new and creative partnerships between the federal government and private technical expertise can contribute to the effectiveness of American intervention abroad for post-disaster recovery.

In June 2001, HUD Secretary Martinez was the first Cabinet Member of the Administration to visit El Salvador after two earthquakes in January and February 2001. Because the areas affected by the 1998 hurricane often overlapped with areas hit by the earthquakes, the on-going HUD program, which was originally designed for post-hurricane reconstruction, served also to reinforce post-earthquake recovery efforts.

El Salvador

Land Use and Site Planning

The revitalization work focused on two poor communities—Los Mantiales and Maria Auxiliadora—on the outskirts of San Salvador. Work began with a comprehensive site plan that included identifications of immediate reconstruction needs and the formulation of long term development strategies. HUD worked with the (U.S.) Cooperative Housing Foundation and Fundacion Salvadorena de Desarrollo y Vivienda Minima (FUNDASAL).

The residents of Los Mantiales live in badly constructed houses located on sites that are subject to severe landslides during heavy rains. After site analysis, soil mechanics studies, and risk assessment, FUNDASAL's studies suggested the relocation of several homes because they were in grave danger from falling rock. FUNDASAL then oversaw the re-planning of the settlement, which opened land for roads and public spaces. Lastly, HUD's efforts created a community organization to implement further changes to build stronger community ties.

In Maria Auxiliadora, the other settlement also located on a steep hillside, HUD was able to undertake more extensive reconstructive projects. After first conducting basic site, soil, and risk analyses, the HUD-approved site plan guided the reinforcing of 31 homes, the improvement of roads and walkways, and the design of water systems. HUD also undertook other measures to minimize the effects of future natural disasters, including building a retention wall and terraces and constructing levees and drainage channels.

Disaster Preparedness

Another major project focused on disaster preparedness in the Bajo Lempa region. HUD worked with a community settled near the Lempa River, an area that floods regularly causing major destruction. The residents and the municipality had neither an early warning system, nor an adequate emergency plan. HUD worked with two non-government organizations—one based in Indiana and one in El Salvador—to create disaster preparation plans for more than 21 communities.

HUD centered its efforts on creating a basic but effective warning system. HUD helped the community establish a communications center for the communities, allowing residents up river to notify those down river when the Lempa was rising beyond acceptable levels. The advanced warning of a flood gives the communities sufficient time to make preparations to evacuate, if necessary. HUD also funded the preparation of evacuation plans for each community, showing a hierarchy of responsibility for tasks, including the issuing of the first alert, and the importance of the location of the central meeting place. Lastly, HUD funds provided a strategy for the municipality on how to organize basic clean up and rebuilding efforts following natural disasters.

Housing Construction Training

The poor in El Salvador, as in most other countries in the developing world, frequently build their own shelters using whatever materials are readily available – such as corrugated tin or wood pallets. As a result, these basic structures are exceptionally vulnerable to strong winds, heavy rains and other natural forces. To help teach people how to build sturdier and safer homes, HUD and the National Association of Home Builders (NAHB) Research Center developed a training manual to illustrate basic safe and durable construction practices for lower income families building their own homes. The Spanish language manual, *Reforzar y Conectar para Proteger: Ideas para Construir Mejor Desastres Naturales*, covers design, materials, technology and management. Written in user-friendly terms and advocating the use of local materials, such as cinder blocks, this manual helps the average resident build safer and more durable dwellings for his family. The manual is available from the Office of International Affairs. NAHB has also produced a companion video to reinforce the lessons in the book for both training sessions and for general television viewing in order to make the general public more aware of the need for building safely.

HUD and NAHB developed simple, low-cost housing construction technologies that strengthen the structural integrity of the home, increasing the chances that it will survive a hurricane. The basic methods being taught include: 1) using “hurricane clips,” which attach the various structures of a home together to withstand high winds; 2) doubling the number of nails used on the roof to minimize the chance that the roof will be blown off; 3) using “U” blocks on windows and doors, which reinforce the openings without needing additional materials; and 4) stressing that concrete should only be mixed with gravel and sand and without any foreign materials that could weaken the mixture. NAHB trained over 300 construction supervisors in three workshops. The teachers and construction supervisors have become trainers in these methods, using the manual and video, and thus multiplying HUD’s impact on building practices among the poorest population.

Housing Finance

By spring 2001, the hurricanes and the recent earthquakes in El Salvador had destroyed or damaged a large part of the national housing stock. For the impoverished majority of the people unable to access any funds to repair homes or to start small enterprises, HUD decided to create micro-finance program. Working through its cooperative agreement with US-based Accion International, HUD partnered with Fundacion Salvadoreña de Apoyo Integral (FUSAI) to capitalize a revolving loan program for both housing reconstruction and micro-enterprise development. The average size of the loans is about \$1,600. More than 400 poor families have already benefited from these loans, using the funds for replacing zinc roofs with reinforced concrete, substituting concrete blocks for rotted wood walls and investing in the growth of their microenterprises. As this is a sustainable loan fund, HUD's funds will continue to have an impact, eventually helping thousands of poor households to strengthen their homes against disasters and pull their way out of poverty. FUSAI also received funds to support technical training in the loan management operations and training and in borrower counseling in basic debt management and property maintenance practices.